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MASS MOVEMENTS INSIDE THE SOLID EARTH INDUCED BY ATMOSPHERE, OCEANS AND SOLID EARTH INTERACTIONS

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Global atmospheric loading induces various interactions between atmosphere and oceans, between atmosphere and solid earth and between solid earth and oceans. We consider the static response of non-global oceans overlying an elastic Earth which is induced by the atmospheric loading located over the continents. Our model take into account the significant oceanic response associated with the continental atmospheric loading, relative to ocean - solid earth interaction. Temporal variations of the gravity field and geodetic sites positions driven by global atmospheric loading and non-global oceanic loading are derived using a global atmospheric pressure data set provided by the European Center for Medium range Weather Forecasts.

Submittal Information

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2. G7 Joint EGS/AGU Symposium on geodetic observation and geophysical interpretation of mass movements in the Earth's system
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4. none
5. Oral presentation strongly preferred

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